RECEIVED
MAY 1 1996
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications	**ET Docket No. 94-124**
Petition of Sky Station International, Inc. for Amendment of the Commission's Rules to Establish Requirements for a Global Stratospheric Telecommunications Service in the 47.2-47.5 GHz and 47.9-48.2 GHz Frequency Bands	**RM-8784**

DOCKET FILE COPY ORIGINAL

OPPOSITION OF MOTOROLA SATELLITE COMMUNICATIONS, INC.

Motorola Satellite Communications, Inc. ("Motorola") hereby opposes the above-captioned petition of Sky Station International ("SSI"). In that petition, SSI requests that the Commission allocate the 47.2-47.5 and 47.9-48.2 GHz bands to a new service, which SSI styles as "Global Stratospheric Telecommunications Service" ("GSTS"), and to relegate an existing FSS allocation in these bands to secondary status. The Commission should reject SSI's petition for several reasons.

No. of Copies rec'd
List ABCDE

First, this spectrum already has a U.S. and global primary allocation to the Fixed-Satellite Service ("FSS"). Coupled with the 38 GHz band, which is allocated for FSS downlinks, these frequencies are the next available bands for fixed-satellite systems. All of the FSS bands below these frequencies are either fully utilized or will soon be seriously congested. Second, the proposed service raises very serious safety and policy questions: the service would be provided by 37-ton platforms supported by balloons and hovering over all metropolitan areas of the world at an altitude of a mere 30 km. In light of the obvious safety risks, the likelihood that such a project could gain broad international acceptance is, to put it charitably, remote. The United States should not jeopardize its credibility in the international arena by pursuing an international allocation for a project with such low prospects of international acceptance.

I. THE 47 GHZ BAND HAS A PRIMARY FSS ALLOCATION THAT MUST NOT BE DOWNGRADED

SSI's petition completely disregards the existing worldwide primary allocation of the 47.2-50.2 GHz band to the FSS. Thus, SSI provides no analysis whatsoever on whether, and

subject to what conditions, its new proposed service could share spectrum with FSS.

SSI's petition suggests that, although allocated, the 47 GHz band remains "relatively undeveloped." SSI Petition at 12. This suggestion ignores the fact that the companion 38 and 47 GHz bands must be maintained for future FSS systems. This is the next available spectrum for FSS. As the Commission is well aware, the existing C and Ku FSS bands are heavily congested. Likewise, the Commission has accepted at least 16 FSS applications for up to 915 satellites in the pending Ka-band processing round, including one non-geostationary system requesting 1000 MHz of exclusive spectrum worldwide.

Clearly, once the Commission processes the pending FSS applications, the opportunity for the next FSS round in these lower bands may not arise for several years. At the same time, the demand for FSS services is expected to continue to increase, as will the need to build new FSS systems to service that demand. The Commission should explore ways of satisfying this need, and certainly should <u>not</u> consider compromising the next existing FSS allocation by inserting another primary allocation in the same spectrum.

Motorola also notes that the proposed reverse band working of the new service in the 47.9-48.2 GHz band could pose

particularly complicated sharing problems for the existing uplink FSS allocation in the band.

For all these reasons, the Commission should not even consider the requested allocation unless SSI, at a bare minimum, submits studies demonstrating that the proposed new service could share the band on a co-frequency, co-coverage basis with the primary existing FSS allocation.

II. THE PROPOSED SERVICE REQUIRES A NEW ALLOCATION

By filing a petition for allocating the band to GSTS, SSI appears to concede, as it must, that its proposed new service would require a new allocation. While GSTS also argues, apparently in the alternative, that GSTS is "generally consistent with" existing international and U.S. allocations, on the ground that it qualifies as a terrestrial "fixed" and/or "mobile" service, see GSTS Petition at 14, such a view is not tenable. The terrestrial fixed and mobile service allocations can hardly be said to contemplate stratosphere-to-earth and earth-to-stratosphere communications provided by means of stratospheric balloon-supported platforms -- as SSI itself emphasizes, an unprecedented concept. Indeed, SSI also acknowledges that its system would be above 99% of the earth's atmosphere. SSI Application at 6. That fact alone would appear

to disqualify the proposed service as a fixed or mobile service.[1/]

III. SSI'S PROPOSAL RAISES SIGNIFICANT PUBLIC SAFETY ISSUES

SSI's proposed service will involve huge balloon-supported platforms hovering just 30 Kilometers over every major metropolitan center in the world and just 20 kilometers above commercial airline flights. The safety concerns from such a system are, to say the least, significant. The 30 Km altitude is most likely not high enough for any debris to burn up before landing on Earth. In such circumstances, SSI's vague assurances that it has addressed safety concerns are simply not enough. See GSTS Petition at 10. SSI's proposal would require thorough study and must command broad consensus from the public safety and aviation communities before the Commission can seriously consider it.

IV. THE UNITED STATES SHOULD NOT PURSUE AN INTERNATIONAL ALLOCATION FOR SSI'S PROPOSED SERVICE

In addition to serious public safety concerns, the proposal of a global stratospheric system raises significant

---

[1/] See 47 C.F.R. § 2.1, defining "spacecraft" as a "man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere."

policy questions. The proposed GSTS platforms would have to lie within sovereign airspace: under generally accepted principles of public international law, a country's sovereign airspace extends at least to the 30 Km altitude contemplated by SSI.[2/] Accordingly, several countries would likely view SSI's proposal as a blatant attempt at infringement of their sovereign rights on behalf of SSI and, more broadly, the United States.

For these reasons, the United States should refrain from pursuing an international allocation for SSI's proposed service. Backing such a project at this critical juncture in the development and implementation of global satellite systems could seriously jeopardize these U.S. initiatives.

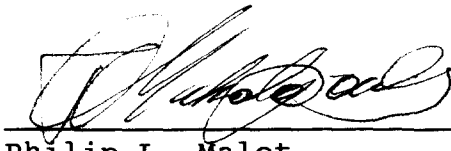
[2/] See e.g., Michael J. Finch, Limited Space: Allocating the Geostationary Orbit, 7 Nw. J. Int'l L. & Bus. 788, 794 (1986) (sovereignty extends to an altitude of sixty kilometers).

V. CONCLUSION

For the foregoing reasons, the Commission should not grant SSI's petition for a new allocation in the 47 GHz Band.

Respectfully submitted,

MOTOROLA SATELLITE
COMMUNICATIONS, INC.



Michael D. Kennedy
Vice President and Director,
Regulatory Relations
Barry Lambergman
Manager, Satellite
Regulatory Affairs
MOTOROLA, INC.
Suite 400
1350 I Street, N.W.
Washington, D.C. 20005
(202) 371-6900

Philip L. Malet
Alfred M. Mamlet
Pantelis Michalopoulos
Mark W. Levine
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 429-3000

Its Attorneys

Dated: May 1, 1996

Certificate of Service

I, Pantelis Michalopoulos, hereby certify that a copy of the foregoing Opposition of Motorola Satellite Communications, Inc. was hand-delivered on this 1st day of May 1996 to the following:

Chairman Reed E. Hundt
Federal Communications Commission
1919 M Street, NW.
Room 814
Washington, DC 20554

Commissioner Rachelle B. Chong
Federal Communications Commission
1919 M Street, NW.
Room 844
Washington, DC 20554

Commissioner Susan Ness
Federal Communications Commission
1919 M Street, NW.
Room 832
Washington, DC 20554

Commissioner James M. Quello
Federal Communications Commission
1919 M Street, NW.
Room 802
Washington, DC 20554

Scott Blake Harris
Chief, International Bureau
Federal Communications Commission
2000 M Street, NW.
Room 800
Washington, DC 20554

Thomas Tycz
Chief, Satellite and Radiocommunications Division
Federal Communications Commission
2000 M Street, NW.
Room 800
Washington, DC 20554

Donald Gips
Deputy Director, International Bureau
Federal Communications Commission
2000 M Street, NW.
Suite 830
Washington, DC 20554

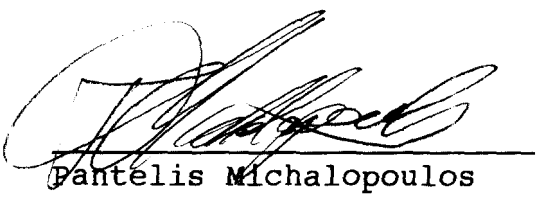
Robert M. Pepper
Chief, Office of Plans and Policy
Federal Communications Commission
1919 M Street, NW.
Room 822
Washington, DC 20554

Richard M. Smith
Chief, Office of Engineering and Technology
Federal Communications Commission]
1919 M Street, NW., Room 480
Washington, DC 20554

Martine Rothblatt
Paul A. Mahon
Christopher Patusky
Mahon & Patusky, Chartered
1735 Connecticut Avenue, N.W.
Washington, DC 20009

Jonathan D. Blake
Lee J. Tiedrich
Covington & Burling
1201 Pennsylvania Avenue, NW.
Washington, DC 20044-7566

Alexander P. Haig
President and Chief Operating Officer
Sky Station International, Inc.
3810 Concorde Parkway, Suite 1600
Chantilly, VA 22021



Pantelis Michalopoulos